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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Biotechnology) (Sem.-6)
ENZYMOLOGY AND ENZYME TECHNOLOGY
Subject Code : BTBT-603
M.Code : 71074

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**1. Write briefly :**

- a) Classes of enzymes
- b) Enzyme assay
- c) Fischer lock and key hypothesis
- d) Lineweaver-Burk plot
- e) Eadie-Hofstee and Hanes plot
- f) Microencapsulation
- g) Enzyme reactors
- h) Biocatalysis
- i) Monomeric enzymes
- j) Enzyme active site

SECTION-B

2. Describe briefly industrial applications of enzymes.
3. Discuss Koshland induced-fit hypothesis.
4. Describe the covalent coupling and cross linking of enzymes.
5. What do you understand from steady state analysis of mass transfer? Explain mass transfer in enzyme reactors.
6. Describe the Haldane relationship for reversible reactions.

SECTION-C

7. Discuss enzyme catalysis in organic media. Also highlight its challenges and future perspectives.
8. Describe the criteria used for the selection of a enzyme reactor. Describe idealized enzyme reactor systems.
9. Describe the Henri & Michaelis-Menton equation and Briggs-Haldane modification of the Michaelis-Menton equation. Also highlight significance of Michaelis-Menton equation.

NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC case against the Student.